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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,870	11/26/2003	Marc Alan Strand	80063	8649

40850 7590 06/09/2005  
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EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/722,870

Applicant(s)

STRAND ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3-11-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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***Response to Arguments***

**In view of applicants' clarification of the intended subject matter, and update searching of this intended subject matter, the following claims have been rejected:**

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claims 1-15, 16, 17-28, 29,30--33 are rejected under 35 U.S.C. 102(e) as being anticipated by US 20040127609 see abstract and pages 1-4.***

**US 20040127609** discloses flame retardant polyester compositions suitable for calendaring may be prepared from polyesters having crystallization half time of at least 5 minutes, a plasticizer, a phosphorus-containing flame retardant miscible with the plasticized polyester, and an additive effective to prevent sticking of the polyester to the calendar rolls. Also disclosed are processes for flame retardant films or sheets by calendaring the above compositions and the flame retardant films or sheets produced therefrom. These films and sheets have excellent appearance, flexibility, and flame retardancy, and can be used in a wide range of decorative and packaging applications. The inherent viscosity, abbreviated

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herein as "I.V.", of the polyesters of the invention generally ranges from about 0.4 to about 1.2 dL/g and, preferably, about 0.5 to about 1.0 dL/g. The term I.V. refers to inherent viscosity determinations made at 25.degree. C. using 0.25 gram of polymer per 50 mL of a solvent composed of 60 weight percent phenol and 40 weight percent tetrachloroethane. Typically, melt strength may be increased by the addition of small amounts (about 0.1 to about 2.0 mole %) of a branching agent to the polyesters either during their initial preparation or during subsequent blending or feeding procedures prior to reaching the calendering equipment. With regard to claims 2-15, 16, 17-28, 29,30—33 see pages 2-4.

With regard to claims 16 and 29 note that the reference discloses that the plasticizer used herein comprises diethylene glycol dibenzoate, abbreviated herein as "DEGDB".

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1-15,17-28, 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6068910 ,See abstract, cols.1-5 examples and FIG. 2A FIG. 2B as well as claims 1-10.***

With regard to claims 1 and 33, note that US 6068910 discloses a polyester

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resin composition is calendered to produce a film or a sheet. The polyester resin composition is a polyester having a crystallization half time from a molten state of at least 5 minutes combined with an additive for preventing sticking of the polyester to calendering rolls. Polyesters useful in the practice of this invention include polyesters having a crystallization half time from a molten state of at least about 5 minutes, preferably about 12 minutes (note applicants claim 10). Note that the reference states that the term "polyesters" as used herein is meant to include copolyesters. Amorphous polyesters are preferred because of their having a crystallization half time of infinity. Desired crystallization kinetics from the melt may also be achieved by adding polymeric additives or by altering the molecular weight characteristics of the polymer. An especially useful technique is to blend amorphous or very slow crystallizing polyester with the base polyester.

The reference discloses that the method of calendering is an economic and highly efficient means to produce film and sheet from plastics such as plasticized and rigid poly (vinyl chloride) (PVC) compositions. The films and sheets usually have a thickness ranging from about 2 mils (0.05 mm) to about 45 mils (1.14 mm). They are readily thermoformed into various shapes and are used for a wide variety of packaging applications. Calendered PVC film or sheet can be used in a wide range of applications including pool liners, graphic arts, transaction cards, security cards, veneers, wall coverings, book bindings, folders, floor tiles and products which are printed or decorated or laminated in a secondary operation. The components listed in the table are as follows. TPA: terephthalic acid IPA: isophthalic acid NDCA: naphthalenedicarboxylic acid EG: ethylene glycol BPAE: ethylene oxide adduct of bisphenol A CHDM: cyclohexanedimethanol DEG: diethylene glycol.

With regard to the diacids and diols as disclosed in applicants' claims 2 and 32 as well as the mole percents as disclosed in applicants' claims 3, 4, 5 and 6 note that the reference states that preferred polyesters comprise (i) at least 80 mole percent of a diacid residue component selected from terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, isophthalic acid or mixtures thereof and (ii) at least 80 mole percent of a diol residue component selected from diols containing 2 to about 10 carbon atoms and mixtures thereof. The diacid residue component is based on 100 mole percent, and the diol residue component is based on 100 mole percent. For the diacid residue component, any of the various isomers of naphthalenedicarboxylic acid or mixtures of isomers may be used, but the 1,4, 1,5-, 2,6-, and 2,7-isomers are preferred. Also, cis, trans, or cis/trans isomer mixtures of 1,4-cyclohexanedicarboxylic acid may be used. Sulfoisophthalic acid may also be used. The diacid residue component may be modified with minor amounts of up to about 20 mole percent of other diacids containing about 4 to about 40 carbon atoms and include succinic acid, glutaric acid, azelaic acid, adipic acid, suberic acid, sebacic acid, dimer acid and the like. For the diol residue component, the preferred diols include ethylene glycol, diethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol and mixtures thereof. More preferably, the diol residue component is from about 10 to 100 mole percent 1,4-cyclohexanedimethanol and from about 90 to 0 mole percent ethylene glycol. The diol residue component may also be modified with up to about 20 mole percent of other diols. Suitable modifying diols include 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, propylene glycol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol and the like.

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With regard to claims 7, 8, 9, 12, 13 and 14 note that in addition to the composition as described above, additives suitable for use in the reference are well known in the calendering art and include internal lubricants, slip agents or mixtures thereof. Examples of such additives include fatty acid amides such as erucylamide and stearamide; metal salts of organic acids such as calcium stearate and zinc stearate; fatty acids and esters such as stearic acid, oleic acid, and palmitic acid; hydrocarbon waxes such as paraffin wax, polyethylene waxes, and polypropylene waxes; chemically modified polyolefin waxes; ester waxes such as carnauba; glycerol mono- and di-stearates; talc; and acrylic copolymers.

With regard to applicants' claim 18, note that the reference states that in a typical calendering process line, the plastic resin is blended with specific ingredients such as stabilizers to prevent thermal degradation; modifiers for clarity, heat stability or opacity characteristics; pigments; lubricants and processing aids; anti-static agents; UV inhibitors; and *flame retardants*.

Further, with regard to both claims 17, 18 and 26, 28 in addition to the additives described above, other additives typically used with polymers may be used as desired. These include plasticizers, dyes, colorants, pigments, fillers, matting agents, antiblocking agents, antistatic agents, chopped fibers, glass, impact modifiers, flame retardants, carbon black, talc, TiO<sub>2</sub> and the like.

With regard to claims 19 and 20 note that the reference discloses that the inherent viscosity (I.V.) of useful polyesters generally range from about 0.4 to about 1.5 dL/g, preferably about 0.6 to about 12 dL/g. I.V. as used herein refers to inherent viscosity determinations made at 25.degree. C. using 0.25 gram of polymer per 100 mL of a solvent composed of 60 weight percent phenol and 40

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weight percent tetrachloroethane. See also description of composition as noted above with regard to applicants dependent claims 21,22, 23 and 24. Applicants argue that Flynn is silent with regard to the benefits of the claimed invention. This is of no consequence and not a requirement of anticipation. Further, applicants state that the "preferred IV...." is different than applicants' claimed invention, which again is of no consequence since the claimed range is clearly disclosed in the reference. The mere fact that the reference chooses a preferred moiety does not negate the anticipation of the claims by the moieties as stated prior to the preferred embodiment. It is the opinion of the Examiner that the reference when taken as a whole would render sufficient clarity to demonstrate possession of the claimed invention. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Thus, in view of the above, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **Correspondence**

**Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources. Applicants may be referred to the**



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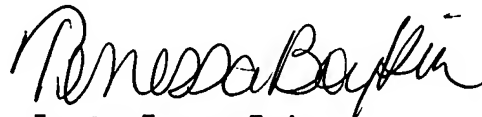
**Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb



**Examiner Terressa Boykin  
Primary Examiner  
Art Unit 1711**